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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/515,310	02/29/2000	John M. Quernemoen	RA-5244	2025

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EXAMINER
DODDS, HAROLD E

ART UNIT	PAPER NUMBER
2177	

DATE MAILED: 06/26/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/515,310	QUERNEMOEN, JOHN M.	
	Examiner	Art Unit	
	Harold E. Dodds, Jr.	2177	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-15 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-15 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 29 February 2000 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Specification

1. The attempt to incorporate subject matter into this application by reference to "Co-Pending Applications" is improper because the U.S. Patent Application Numbers and filing dates have not been supplied.

Correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bartlett et al. (U.S. patent No. 6,263,382), Benmohamed et al. (U.S. Patent No. 6,240,463), Hayashi et al. (U.S. Patent No. 5,857,195), and Ong (U.S. Patent No. 5,815,662).

4. Bartlett rendered obvious independent claim 1 by the following:

"...obtaining at least one user defined workload requirement..." at col. 3, lines 19-21.

"...of said user defined workload requirement..." at col. 3, lines 19-21.

Bartlet does not teach the calculation and displaying requirements, the use of database management systems, the use of server hardware requirements, and the use of functions.

5. However, Benmohamed teaches the calculation and display of requirements and the use of functions as follows:

"...calculating the...requirements..." at col. 12, lines 30-34.

"...as a function..." at col. 4, lines 49-53.

"...displaying...requirements..." at col. 13, lines 25-28.

It would have been obvious to one ordinarily skilled in the art at the time of the invention to use the user input to calculate hardware requirements using mathematical equations or functions and then displaying the results of these calculations to the users in order to provide a system, which processes user input and provides feedback to the users on the effects of the input data on hardware models.

Benmohamed does not teach the use of database management systems and the use of server hardware requirements.

6. However, Hayashi teaches the use of database management systems as follows:

"...database management system..." at col. 1, lines 29-33.

"...said database management system..." at col. 1, lines 29-33.

It would have been obvious to one ordinarily skilled in the art at the time of the invention to use database management system (DBMS) requirements as requirements for a system in order to provide a standard method for using a computer system to store data and gain acceptance for the method of determining hardware requirements.

Hayashi does not teach the use of server hardware requirements.

7. However, Ong teaches the use of server hardware requirements as follows:

"...server hardware requirements..." col. 3, lines 10-15.

It would have been obvious to one ordinarily skilled in the art at the time of the invention to use server hardware requirements in the specification of a computer system in order to provide requirements for the hardware components contain the database management system software, which processes query requests to databases and provides interface access for these queries and then returns the results of these queries to the users.

8. As per claim 5, the "...a number of users supported...," is taught by Ong at col. 6, lines 9-11.

9. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bartlett, Benmohamed, Hayashi, and Ong as applied to claim 1 above, and further in view of Kulkarni et al. (U.S. Patent No. 6,138,016).

As per claim 2, the "...a plurality of inputs from a user...," is taught by Bartlett at col. 3, lines 19-21,

the "...including a server type...," is taught by Bartlett at col. 3, lines 42-46,

the "...a maximum desired processor utilization...," is taught by Bartlett at col. 16, lines 25-29,

but the "...and a transactions per second requirement...," is not taught by either Bartlett, Benmohamed, Hayashi, or Ong.

However, Kulkarni teaches the use of transactions per second as follows:

"...To overcome the requirement of localizing the HLR in a single expensive machine, with a very high rate of messages per second and data base transactions per second, and according to this invention, the HLR function is distributed across multiple processors..." at col. 1, lines 58-62.

It would have been obvious to one ordinarily skilled in the art at the time of the invention to use transactions per second to measure the throughput of processors in order to use a standard means of measurement to quantify the use of the processors.

10. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bartlett, Benmohamed, Hayashi, and Ong as applied to claim 1 above, and further in view of Tan et al. (U.S. Patent No. 6,356,902).

As per claim 3, the "...a number of processors requirement..., is taught by Bartlett at col. 11, lines 66-67,

the "...and a mass storage requirement...," is taught by Bartlett at col. 8, lines 50-52,

but the "...a memory size requirement...," is not taught by either Bartlett, Benmohamed, Hayashi, or Ong.

However, Tan teaches the use of a memory size requirement as follows:

"...Introducing null nodes has a harmful effect on the memory size requirement of virtual memory data processing systems, wherein fixed-length blocks of memory often referred to as "page" are utilized..." at col. 1, lines 55-59.

It would have been obvious to one ordinarily skilled in the art at the time of the invention to use memory size requirement as a measure of physical blocks of memory used for storing data in order to use a standard feature of data storage architecture and obtain better acceptance of the method for determining server hardware requirements.

11. Claims 4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bartlett, Benmohamed, Hayashi, and Ong as applied to claim 1 above, and further in view of Yamaji et al. (U.S. Patent No. 4,495,562).

As per claim 4, the "...an effective CPU utilization...," is not taught by either Bartlett, Benmohamed, Hayashi, or Ong.

However, Yamaji teaches the use of effective central processing unit (CPU) utilization as follows:

"...As is apparent from the foregoing definitions, the progress rate coefficient of the job i is equal to the sum of the utilization ($CPU_i/ESTIME_i$) for the CPU by each job and the utilization ($IO_i/ESTIME_i$) for the I/O device by each job and is interpreted to be the net utilization of the job i. Therefore, the average progress rate coefficient is interpreted to be an average of the net utilization of each job, especially an effective average weight by the elapse time $ESTIME_i$ and the throughput coefficient is interpreted to be the total of the net utilizations of the respective jobs..." at col. 5, lines 24-34.

It would have been obvious to one ordinarily skilled in the art at the time of the invention to use effective CPU utilization as a measure of activity of a CPU activity in order to use a commonly used means to determine the extent of processing being performed by the CPU.

12. As per claim 6, the "...an effective CPU utilization...," ia taught by Yamaji at col. 5, lines 24-34

and the "...a number of users supported...," is taught by Ong at col. 6, lines 9-11.

13. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bartlett, Benmohamed, Hayashi, and Ong as applied to claim 1 above, and further in view of Blake et al. (U.S. Patent No. 6,067,412).

As per claim 7, the "...and said properties include a calculated...," is taught by Benmohamed at col. 12, lines 30-34,

the "...and a ratio of said calculated...," is taught by Benmohamed at col. 12, lines 30-34,

and the "...wherein said calculating step calculates values for said calculated...ratio...," is taught by Benmohamed at col. 12, lines 30-34,

but the "...a baseline system...,"

the "...transactions per second...,"

the "...transactions per second value...,"

the "...transactions per second...,"

the "...transactions per second...,"

the "...to said baseline...,'

the "...transactions per second...,"

and the "...and said transactions per second...," are not taught by either Bartlett, Benmohamed, Hayashi, or Ong.

However Blake teaches the use of a baseline system and transactions per second as follows:

"...This information about the performance of the operating system is preferably generated during the construction of the model by using the synthetic workload generator to apply known workloads to a baseline computer system and using the actual performance measurements as an indication of the operating system performance...." at col. 9, lines 44-48.

:...Thus, if the current CPU was replaced by a CPU that was twice as fast, the computer system still could only handle 2 transactions per second..." at col. 2, lines 8-10.

It would have been obvious to one ordinarily skilled in the art at the time of the invention to use a baseline computer system in order to provide a standard reference to the workload of a computer to compare against actual workload performance. Likewise, it would have been obvious to one ordinarily skilled in the art at the time of the invention to use transactions per second to measure the throughput of processors in order to use a standard means of measurement to quantify the use of the processors.

14. Claims 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bartlett, Friedrich et al. (U.S. Patent No. 5,276,877), Culley (U.S. Patent No. 5,125,088), and Garofalakis et al. (U.S. Patent No. 5,845,279), and Benmohamed.

15. Bartlett rendered obvious independent claim 8 by the following:

"...obtaining at least one input from a user..." at col. 3, lines 19-21.

"...obtaining from said user..." at col. 3, lines 19-21.

Bartlet does not teach the use of transactions, the use of workload contributions, the use of an expected execution rate, calculating a total workload, and displaying the results of the calculations to users.

16. However, Friedrich teaches the use of transactions, and the use of workload contributions as follows:

"...a plurality of transactions..." at col. 11, lines 44-52.

"...wherein each of said transactions have..." at col. 11, lines 44-52.

"...a transaction..." at col. 11, lines 44-52.

"...workload contribution..." at col. 26, lines 18-23.

"...calculating a total workload..." at col. 19, lines 29-32.

"...transaction..." at col. 11, lines 44-52.

"...workload contribution..." at col. 26, lines 18-23.

"...and transaction..." at col. 11, lines 44-52.

"...of said transactions..." at col. 11, lines 44-52.

It would have been obvious to one ordinarily skilled in the art at the time of the invention to use transactions as basic units of processor throughput in order to use standard quantifiable units. Likewise, it would have been obvious to one ordinarily skilled in the art at the time of the invention to use the workload contribution of these transactions in order to differentiate between the various inputs used to determine the processing capability of a computer system.

Friedrich does not teach the use of an expected execution rate, calculating total workloads, and displaying the results of the calculations to users.

17. However, Culley teaches the use of expected execution rares as follows:

"...and an expected execution rate per second..." at col. 19, lines 55-62.

"...execution rate..." at col. 19, lines 55-62.

It would have been obvious to one ordinarily skilled in the art at the time of the invention to use expected execution rates in order to define a model for a baseline computer system and compare the baseline model with the actual results obtained.

Culley does not teach calculating total workloads and displaying the results of the calculations to users.

18. However, Garovalakis teaches calculating total workloads as follows:

"...calculating...as a function..." at col. 8, lines 6-8 and col. 8, lines 24-28.

"...said total workload..." at col. 14, lines 27-29.

It would have been obvious to one ordinarily skilled in the art at the time of the invention to calculate total workloads in order to determine the workload on a computer system, which is defined as the total contribution of all the transactions used in this model.

Garovalakis does not teach displaying the results of the calculations to users.

19. However, Benmohamed teaches displaying the results of the calculations to users ad follows.

"...and display...to said human user...." at col. 13, lines 25-28.

It would have been obvious to one ordinarily skilled in the art at the time of the invention to display the results of calculations to the users in order to provide feedback to the users on the effects of the input data on hardware models.

20. As per claim 9, the "...include a server type...," is taught by Bartlett at col. 3, lines 42-46.

21. As per claim 10, the "...maximum desired processor utilization...," is taught by Bartlett col. 16, lines 25-29.

22. As per claim 11, the "...maximum desired...utilization...," is taught by Bartlett col. 16, lines 25-29

and the "...network interface card...," is taught by Bartlett at col. 3, lines 47-54.

23. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bartlett, Friedrich, Culley, Garofalakis, and Benmohamed as applied to claim 8 above, and further in view of Schumacher et al. (U.S. Patent No. 6,032,664).

As per claim 12, the "...a server type...," is taught by Bartlett at col. 3, lines 42-46, the "...a maximum desired processor utilization...," is taught by Bartlett col. 16, lines 25-29,

the "...a maximum desired...utilization...," is taught by Bartlett col. 16, lines 25-29,

the "...network interface card...," is taught by Bartlett at col. 3, lines 47-54,

but the "...a LAN speed...," is not taught by either Bartlett, Friedrich, Culley, Garofalakis, or Benmohamed.

However, Schumacher teaches the use of LAN speeds as follows:

"...The Remote Node method requires less equipment and software than the Remote Control method, and the remote user's application executes the same as if he were working directly on one of the LAN's nodes with the only difference being communication speed versus LAN speed..." at col. 2, lines 50-54.

It would have been obvious to one ordinarily skilled in the art at the time of the invention to use LAN speed in the calculations for the throughput of a multi-computer system in order to use to speed of communications between the processors when determining the throughput of the system.

24. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bartlett, Friedrich, Culley, Garofalakis, Benmohamed, and Schumacher as applied to claim 8 above, and further in view of Reiner et al. (U.S. Patent No. 6,289,334).

As per claim 13, the "...each of said transactions...," is taught by Friedrich at col. 11, lines 44-52,

the "...wherein each of said transaction...," is taught by Friedrich at col. 11, lines 44-52,

the "...workloads...," is taught by Friedrich at col. 26, lines 18-23,

the "...are calculated by calculating...," is taught by Benmohamed at col. 12, lines 30-34,

the "...a workload contribution...," is taught by Friedrich at col. 26, lines 18-23,

the "...and wherein a percent contribution...," is taught by Friedrich at col. 26, lines 18-23,

the "...of total workload is specified...," is taught by Friedrich at col. 19, lines 29-32,

but the "...include at least one SQL statement..."

and the "...of each of said SQL statements...," are not taught by either Bartlett, Friedrich, Culley, Garofalakis, Benmohamed, or Schumacher.

However, Reiner teaches the use of SQJ statements as follows:

"...The QD SORT building block is structurally similar to the AGGREGATE building block: it has QD-generated SQL statements to create a temporary sort table, insert rows in that table, select rows in sorted order from that table, and drop the table when it is finished with it..." at col. 67, lines 15-19.

It would have been obvious to one ordinarily skilled in the art at the time of the invention to use SQL statements when determining the throughput of a computer system in order to use the basic command statements of a database management system language to help determine the throughput of a computer system using a database management system.

25. As per claim 14, the "...said SQL statements...," is taught by Reiner at col. 67, lines 15-19,

the "...include insert...," is taught by Reiner at col. 56, lines 36-39,

the "...delete...," is taught by Reiner at col. 67, lines 23-25,

the "...update...," is taught by Reiner at col. 64, lines 29-31,

the "...and select...," is taught by Reiner at col. 56, lines 36-39,

and the "...SQL statement types...," is taught by Reiner at col. 67, lines 15-19.

26. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bartlett, Friedrich, Culley, Garofalakis, Benmohamed, Schumacher, and Reiner as applied to claim 14 above, and further in view of Berenson et al. (U.S. Patent No. 6,356,887).

As per claim 15, the "...said insert SQL types...," is taught by Reiner at col. 56, lines 36-39,

the "...have parameters...,' is taught by Reiner at col. 56, lines 36-39,

the "...including...insert statements...," is taught by Reiner at col. 56, lines 36-39,

the "...and wherein said insert statement...," is taught by Reiner at col. 56, lines 36-39,

the "...SQL workload contribution...," is taught by Friedrich at col. 26, lines 18-23,

the "...is a function...," is taught by Reiner at col. 53, lines 10-14,

the "...of said statement parameters...," is taught by Reiner at col. 56, lines 36-39,

the "...said delete SQL types...," is taught by Reiner at col. 67, lines 23-25,

the "...have parameters...," is taught by Reiner at col. 56, lines 36-39,

the "...including...delete statements...," is taught by Reiner at col. 67, lines 23-25,

the "...and wherein said delete statement...," is taught by Reiner at col. 67, lines 23-25,

the "...SQL workload contribution...," is taught by Friedrich at col. 26, lines 18-23,

the "...is a function...," is taught by Reiner at col. 53, lines 10-14,

the "...of said statement parameters...," is taught by Reiner at col. 56, lines 36-39,

the "...said update SQL types...," is taught by Reiner at col. 64, lines 29-31,

the "...have parameters...," is taught by Reiner at col. 56, lines 36-39,

the "...including a number of records...," is taught by Reiner at col. 10, line 67 abd col. 11, lines 1-2,

the "...to be operated on...," is taught by Reiner at col. 37, lines 2-4,

the "...by said update statement...," is taught by Reiner at col. 64, lines 29-31,

the "...and wherein said update statement...," is taught by Reiner at col. 64, lines 29-31,

the "...SQL workload contribution...," is taught by Friedrich at col. 26, lines 18-23,

the "...is a function...," is taught by Reiner at col. 53, lines 10-14,

the "...of said statement parameters...," is taught by Reiner at col. 56, lines 36-39,

the "...and said select SQL types...," is taught by Reiner at col. 56, lines 36-39,

the "...have parameters...," is taught by Reiner at col. 56, lines 36-39,

the "...including selectivity criteria...," is taught by Reiner at col. 29, lines 57-61,

the "...and wherein said select statement...," is taught by Reiner at col. 56, lines 36-39,

the "...SQL workload contribution...," is taught by Friedrich at col. 26, lines 18-23,

the "...is a function...," is taught by Reiner at col. 53, lines 10-14,

the "...of said statement parameters...," is taught by Reiner at col. 56, lines 36-39,

but the "...a number of identical...statements..."

and the "...a number of identical...statements...," are not taught by either Bartlett, Friedrich, Culley, Garofalakis, Benmohamed, Schumacher, or Reiner.

However, Berenson teaches the use of a number of identical statements as follows:

"...When those applications issue a large number of simple statements, compilation time can become the dominant cost factor...." at col. 1, lines 54-56.

"...Such an unsafe execution plan will only be reused if an identical statement is received..." at col. 13, lines 43-45.

It would have been obvious to one ordinarily skilled in the art at the time of the invention to use the number of identical statements with insert statements and delete statements in order to simplify the calculation associated with determining the throughput of a system having a database management system.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Harold E. Dodds, Jr. whose telephone number is (703)-305-1802. The examiner can normally be reached on Monday - Friday 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Breene can be reached on (703)-305-9790. The fax phone numbers for the organization where this application or proceeding is assigned are (703)-305-9730 for regular communications and 703-746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-305-3900.

Harold E. Dodds, Jr.
Patent Examiner
June 24, 2002

JOHN BREENE
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